Fluor Hanford
Post Office Box 1000
Richland, Washington 99352

RECEIVED
JAN 24 2003
EDMC

FLUOR

Memorandum

200 AFD-02-040

To:	R. W. Bailey	S4-49	Date:	December 19, 2002
From:	G. J. LeBaron	S4-49	Telephone:	
cc:	R. C. Brunke	N1-26	R. Ranade	N1-26
	R. H. Gurske	H8-73	D. J. Riffe	L5-66
	A. G. Miskho	N1-26	R. L. Stephenson	S4-49
	J. K. Perry	L1-04		

Subject: LAND DISPOSAL RESTRICTION ASSESSMENT DATA GAP PLAN FOR THE 224-T PROCESS CELLS

References:

(1) Letter, Sally A. Sieracki, RL, to E. K. Thompson, FH, "Contract No. DE-AC06-96RL13200 – Resource Conservation and Recovery Act (RCRA) Assessment – A&E-SEC-02-009," 02-PMO-0003, #0203878, dated August 19, 2002.

(2) Letter, Alan E. Hopko, RL, to E. K. Thompson, FH, "Contract No. DE-AC06-96RL13200 – Annual Land Disposal Restriction (LDR) Report Requirements and Notification to Conduct Assessments," 02-WMD-213, #0202987, dated June 25, 2002.

(3) "Calendar Year 2001 Hanford Site Mixed Waste Land Disposal Restrictions Report Volumes 1 and 2," DOE/RL-2002-21, dated April 2002.

This letter documents the Data Gap Plan (Attachment) for the 224-T Process Cells. The Data Gap Plan is required by the Potential Mixed Waste Table contained in Reference 3. The content of the attached Data Gap Plan is determined by Reference 2. This Data Gap Plan, along with the LDR storage assessment in Reference 1, must be presented to the State of Washington Department of Ecology (Ecology) and entered into the Tri-Party Agreement Administrative Record. The preferred method to accomplish this is to present the two documents during the Tri-Party Agreement Project Managers Meeting covering the 224-T Process Cells.

If you have any questions, please call me on 373-1792.

ATTACHMENT – THE 224-T PROCESS CELLS DATA GAP PLAN

This attachment fulfills the requirements of a Data Gap Plan, as described in the expectations for the Land Disposal Restrictions (LDR) report prepared in accordance with the Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) under Milestone M-26-01[1]. Accordingly, a data gap plan must contain the following:

- What you know and what you don't know
- What you need to know
- Why the level of unknowns is acceptable or not acceptable from a safety basis for the interim until action is planned or that more information is needed to make this determination.

These Data Gap Plan elements need to be addressed for the mixed waste (MW) and the potential mixed waste (PMW) matrices identified by the LDR Storage Assessment[2]. The 224-T Process Cells LDR Storage Assessment identified the following MW and PMW matrices:

Mixed Waste Matrices	Potential Mixed Waste Matrices
None	Liquids in vessels
	Liquid in deep cell
	2 cardboard boxes
	Glovebox/hood

What you know and what you don't know

The information for this item is provided by the LDR Storage Assessment and any additional project evaluation information documented in this Data Gap Plan. Since the time that the LDR Storage Assessment was completed in August 2002, manned entries into the process cells have taken place. The information about the matrices is being updated in this Data Gap Plan.

Liquids in vessels

Non-destructive assay (NDA) results on levels of plutonium show that there is a low probability of any substantial quantity of liquids in the vessels. The project does not know for sure whether substantial residues reside in the vessels; however based on 1) the

[1] Letter, Alan E. Hopko, RL, to E. K. Thompson, FH, "Contract No. DE-AC06-96RL13200 – Annual Land Disposal Restriction (LDR) Report Requirements and Notification to Conduct Assessments," 02-WMD-213, #0202987, dated June 25, 2002.

[2] Letter, Sally A. Sieracki, RL, to E. K. Thompson, FH, "Contract No. DE-AC06-96RL13200 – Resource Conservation and Recovery Act (RCRA) Assessment – A&E-SEC-02-009," 02-PMO-0003, #0203878, dated August 19, 2002.

common practice to account for and remove all readily accessible plutonium using draining and flushing techniques (leave the vessels "empty"), 2) the NDA results, and 3) experience with similar processing operations in other facilities, there is a high probably that there are little or no residuals in the vessels. Further, the chemical flow sheet for the process and the chemical makeup of flushes commonly used are known. Therefore, if there is liquid in the vessels, the dangerous prorerties/constituents would be corrosivity and heavy metals. Since the vessels are constructed of stainless steel, there are no safety issues.

Liquid in deep cell

The liquid in the deep cell has been characterized and designated and will be managed as a non-dangerous, radioactive matrix. The sampling and analysis results were provided to Ecology during the summer of CY2002.

2 cardboard boxes

The 2 cardboard boxes have been dispositioned and the contents are being properly managed. None of the contents designated as dangerous waste.

Glovebox/hood

The glovebox/hood contains a critically safe slab tank (vessel) that was used to load out plutonium nitrate solutions. The common practice with plutonium was to account for and remove all readily accessible plutonium using draining and flushing techniques. If there is residual liquid in the vessel, the dangerous properties/constituents would be corrosivity and maybe heavy metals. Since the vessel is constructed of stainless steel, there are no safety issues.

What you need to know

The information for this item contains the information needed to approach the Tri-Party Agreement lead regulatory agency project manager (Ecology in this case) in order to have discussions on the MW and PMW matrices. Phase II activities described in the LDR Storage Assessment report are intended to provide the information in order to determine if the matrices can be left in place until the building is demolished.

Liquids in vessels

Visually verify that the vessels are "empty" (minimum heel) and that there are no residuals. Sample and designate any heel liquid before final disposition of the vessels. The vessels will be looked at on a cell-by-cell approach.

Liquid in deep cell

Not applicable. The matrix will be managed as a non-dangerous, radioactive matrix. The matrix can be removed from the LDR Report Potential Mixed Waste Table.

2 cardboard boxes

Not applicable. The boxes have been dispositioned. The boxes can be removed from the LDR Report Potential Mixed Waste Table.

Glovebox/hood

Verify that the vessel is "empty" (minimum heel) and that there are no residuals. Sample and designate any heel liquid before final disposition of the vessel. The vessel will be looked at in conjunction with the cells.

Why the level of unknowns is acceptable or not acceptable from a safety basis for the interim until action is planned or that more information is needed to make this determination.

The level of unknowns regarding the PMW matrices will not result in any concerns regarding the safe management of the matrices. Sufficient information exists so that there are no likely concerns about ignitable, reactive, or incompatible matrix properties. The project's scheduled activities will be discussed with the TPA lead regulatory agency project manager after the Data Gap Plan is entered into the TPA Administrative Record.